

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

|                                 |   |                     |
|---------------------------------|---|---------------------|
| NUANCE COMMUNICATIONS, INC. and | ) |                     |
| PHONETIC SYSTEMS LTD.,          | ) |                     |
|                                 | ) |                     |
| Plaintiffs,                     | ) |                     |
|                                 | ) | C.A. No. 06-105-SLR |
| v.                              | ) |                     |
|                                 | ) |                     |
| TELLME NETWORKS, INC.,          | ) |                     |
|                                 | ) |                     |
| Defendant.                      | ) |                     |

**REPLY BRIEF IN SUPPORT OF TELLME'S  
MOTION FOR SUMMARY JUDGMENT OF INVALIDITY**

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## **I. INTRODUCTION**

Defendant Tellme Networks, Inc. ("Tellme") respectfully submits this reply brief in support of its motion for summary judgment that all claims of U.S. Patent No. 5,033,088 (the "'088 patent") (D.I. 143 at Ex. 1) are invalid as anticipated and obvious.

The '088 patent is a simple patent to understand. It discloses a basic system for processing speech (*e.g.*, over a telephone call) using automatic speech recognition and human operator back up to accomplish a task. It is a short patent with just a three column specification and five claims. Not surprisingly, the short specification does not describe the claimed invention in any great depth. Moreover, the patent does not describe or claim anything that was not already in existence. It discloses and claims a combination of well-known elements, including: prompting speech, recording speech, automatic speech recognition, and operator assistance.

As Tellme discovered during this litigation, the alleged point of novelty of the combination—"dual path" with record/playback—was disclosed in the Hitachi patent *seven years* before Mr. Shipman filed the application that led to the '088 patent. *Id.* at Ex. 2. Mr. Shipman touted the "dual path" repeatedly to the Patent Office, and this point of novelty was the sole basis upon which the Patent Examiner allowed the '088 patent. D.I. 140 at 4-5.

Faced with Hitachi, which was never considered by the Patent Office, Nuance is now touting the importance of "reliably recognized." Determining whether speech was "reliably recognized" is simply not a patentable invention. During patent prosecution, it does not appear that Mr. Shipman thought so either. He did not bother to even use the word "reliably" in his short specification or raise the distinction regarding reliably recognized with the Patent Examiner. A step of checking to see if speech was reliably recognized was well known in the prior art and was just plain common sense.

Neither "reliably recognized" nor any of the other ancillary arguments made by Nuance raise a fact dispute that is sufficient to prevent summary judgment of anticipation or obviousness. Hitachi anticipates the '088 patent. In addition, Hitachi in combination with common sense, the knowledge of one of skill in the art, or other references renders the '088 patent obvious. Tellme's motion on invalidity should be granted.

## II. HITACHI DISCLOSES RELIABLE RECOGNITION

Nuance tries to distinguish Hitachi by asserting that it does not disclose reliable recognition. That theory is refuted by the record.

The Hitachi patent discloses a voice recognition system for connecting callers to a requested telephone extension. It expressly states that after the end of the fully automated path, "[t]he party requesting to be connected to the extension on the central office line side is then able to communicate with the *desired* extension subscriber." D.I. 143 at Ex. 2 (TELLME6118) (emphasis added).<sup>1</sup> In order to connect a caller to the *desired* extension and not some *random* extension, reliable recognition is required. This reliability was provided in the speech recognition process, including optimal correlation, described in Tellme's opening brief and further below. D.I. 140 at 10-13. If the recognition was not reliable, Hitachi discloses reverting to the operator-assisted path. D.I. 143 at Ex. 2 (TELLME6120).

Moreover, claim 2 of the Hitachi patent uses the phrase "successfully recognized" to decide which of the dual-paths to follow rather than just using the term "recognized" alone. *Id.* at Ex. 2 (TELLME6111).<sup>2</sup> The use of "successfully" provides an additional disclosure in

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<sup>1</sup> Nuance's belated translation of the Hitachi patent also discloses the connection to a "desired extension": "By this means, the person requesting connection to an extension on the main-line side is able to converse with the desired extension subscriber." D.I. 153 at Nuance Appx 0508.

<sup>2</sup> Nuance's belated translation of the Hitachi patent similarly uses the term "success" to modify recognition: "when recognition success is achieved within said predetermined number of attempts . . ." (D.I. 153 at Nuance Appx 0505).

Hitachi of "reliably recognized" and confirms that "reliability" (*i.e.*, accuracy or success under Nuance's proposed claim construction) was part and parcel of Hitachi's invention.

If Hitachi was only concerned with recognition and not reliability, as Nuance alleges, the term "successfully recognized" would be superfluous. The system would only determine whether the word was recognized or not. It would not care whether the recognition was successful. In order to ensure that the system connects the caller to the *desired* extension, the Hitachi patent must care about the success or reliability of the recognition.

Nuance also offers unsupported speculation that the Hitachi company's "failure to commercialize the invention of the Hitachi patent likely arose from Hitachi's failure to incorporate a reliability determination into its product." D.I. 151 at 11-12. This speculation is not supported by a shred of evidence, and is completely implausible because reliable speech recognizers were well known in the art. More basically, "[t]he relevance of a patent as prior art is not affected by whether the claimed invention was ever commercialized." *Trojan, Inc. v. Shat-R-Shield, Inc.*, 1989 WL 128622, at \*2 (Fed. Cir. Oct. 31, 1989) (unpublished opinion) *citing In Re Blake*, 352 F.2d 309, 312 (CCPA 1965); *McNeil-PPC, Inc. v. L. Perrigo Co.*, 337 F.3d 1362, 1369-70 (Fed. Cir. 2003) (affirming a judgment of obviousness based, in part, on prior art references that were never commercialized).

### **III. RELIABLE RECOGNITION IS NOT INVENTIVE**

Reliable speech recognition is not only disclosed in Hitachi – it was well known in the prior art. *See* D.I. 140 at 11-13, 24-27.

#### **A. Reliably Recognized Is In The Prior Art**

Reliable speech recognizers were known before the '088 patent. The Rabiner and Jones articles cited in Tellme's opening brief are replete with references noting the importance of

reliability in speech recognition. D.I. 140 at 24-27.<sup>3</sup> Rabiner expressly notes that "the power of speech recognition lies in its ability to perform a given task reliably." D.I. 143 at Ex. 3 (p. 635). As discussed in Tellme's opening brief and below, the prior art disclosed the use of thresholds to determine if a recognition candidate was reliably recognized.

**B. Mr. Shipman Did Not Invent Reliable Recognition or Any Test For Determining Reliable Recognition**

Nuance now re-casts the claimed invention by arguing that the "reliability determination, i.e., the determination of whether the user's speech was reliably recognized, was a novel aspect of Shipman's invention." D.I. 151 at 4. However, Nuance's own expert candidly admitted in deposition that Mr. Shipman did not invent reliable speech recognition or the methods allegedly disclosed in the '088 patent for determining if the recognition was reliable (*e.g.*, calculating a probability of correctness) or any of the metrics that might be used in a reliability determination (*e.g.*, confidence scores). Specifically, Dr. Polish testified:

**Q. Do you believe Mr. Shipman invented the concept of reliable recognition?**

**A. No, I don't think so.**

\* \* \*

**Q. We established that Mr. Shipman didn't invent any speech recognizer.**

**A. That's right.**

**Q. He didn't invent statistical language models?**

**A. That's right.**

**Q. He didn't invent Hidden Markov Models.**

**A. That's right.**

**Q. He did not invent fully automated telephone based speech recognition systems.**

**A. That's right.**

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<sup>3</sup> The Jones article was cited in the prosecution history and was referenced by Tellme's expert, Ivan Zatkovich, in both of his expert reports for Tellme and in his deposition. Nuance and Mr. Shipman have been aware of this art long before the present litigation.

**Q. He didn't invent confidence scores.**

**A. Right.**

**Q. He didn't invent probability of correctness.**

**A. That's right.**

**Q. He didn't invent the concept of checking the checksum of a digit string?**

**A. That's right.**

Supp. Ex. 1 (Polish Depo.) at 41:20-22; 92:22-93:18 (emphasis added).<sup>4</sup>

Moreover, even in Dr. Polish's declaration, which attempts to recast some his deposition testimony, he admitted that the "basic technical components of the '088 patent, *e.g.* speech recognizers, speech prompters, speech recorders, probabilities, statistical language models, etc. existed before the filing of the '088 patent." D.I. 153 at Nuance Appx 443 (§ 7).

Dr. Polish's testimony and declaration confirms that Nuance's reliance on "reliably recognized" is misplaced. The concept of determining if speech was reliably recognized and the alleged methods for doing so were already known in the prior art at the time of the '088 patent. That is not something Mr. Shipman invented.

### **C. Reliably Recognized Is Obvious and Apparent**

In addition to being in the prior art, as discussed below, it is just obvious and apparent that if there is a problem with the reliability of results received from a speech recognizer, one of skill in the art would add some type of check to determine which results were reliable. The alternative would be to let unreliable results pass through the system.

Moreover, a reliability check is just plain common sense. It is a basic concept that has been used in everyday life since well before the time of the '088 patent. People check the reliability of information they receive all the time. Journalists and law enforcement agencies,

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<sup>4</sup> "Supp. Ex." refers to exhibits in the Supplemental Appendix of Exhibits to Tellme's Summary Judgement Briefs, filed with this brief.



for example, routinely check the reliability of information they receive, and have been doing so for decades before the '088 patent. Applying a reliability check to speech recognition—particularly when all of the elements for the check were known in the art—is obvious.

#### **IV. HITACHI ANTICIPATES EACH ASSERTED CLAIM OF THE '088 PATENT**

As set forth in Tellme's opening brief, Hitachi discloses each and every claim element of the '088 patent. D.I. 140 at 7-21. Nuance does not dispute this for most claim limitations. Notably, it concedes that Hitachi discloses the only allegedly novel aspect of the '088 patent – dual path with record/playback to an operator. Nuance only disputes the presence of (1) a step to determine if the speech was reliably recognized or recognizable/unrecognizable and (2) task completion through automation after operator intervention. Both of these disputed points are disclosed in Hitachi and are obvious in light of Hitachi.

##### **A. Hitachi Discloses Determining If The Speech Was Reliably Recognized**

###### **1. Hitachi Discloses Reliably Recognized Under Tellme's Proposed Claim Construction**

There is no dispute that Hitachi discloses reliably recognized under Tellme's proposed claim construction of "meets the recognition criteria of the particular system." Nuance only disputes the presence of this element in Hitachi under Nuance's proposed construction of "accurately recognized so that correct information is received and processed."

###### **2. Hitachi Discloses Reliably Recognized Under Nuance's Proposed Claim Construction**

As noted above, the Hitachi system connects the caller to the "desired" extension at the end of the fully automated path. The system also makes its decision on which of the dual paths to follow based on whether or not the speech was "successfully recognized." In order to achieve the goal of making the desired connection and determining which path to follow, it must determine whether the extension number spoken by the caller was accurately recognized.

Hitachi determines whether the recognition was accurate during the speech recognition process. In this process the voice recognition unit "compares and matches up the stored pattern information" and "sends the extension number that optimally correlates with the stored patterned information." D.I. 143 at Ex. 2 (TELLME 6116). In the absence of optimal correlation, a recognition failure occurs and the utterance made by the caller is not considered to be reliably recognized. *Id.* At that point the caller is reprompted to speak his request or the system reverts to the operator-assisted path and a recording of the speech is played for the operator. *Id.* at Ex. 2 (TELLME 6117, 6120).

According to the inventor, Mr. Shipman, one way of identifying whether something is reliably recognized is to compare metrics associated with the result (*e.g.*, a confidence score) to a threshold that has been established by the system designer. D.I. No. 143 at Ex. 10 (108:21-109:9). The use of thresholds to ensure accuracy in speech recognition was very well known in prior art. D.I. 140 at 24-27 (discussing Jones and Rabiner); Supp. Ex. 2 (Zatkovich Invalidity Report) at ¶¶ 27-30, 77-83; Supp. Ex. 3 (Zatkovich Depo.) at 261:17-262:2.

One of skill in the art understands that the Hitachi system uses a threshold comparison as part of the speech recognition process. Supp. Ex. 2 (Zatkovich Invalidity Report) at ¶¶ 115, 117. Indeed, Nuance's expert unequivocally admitted during his deposition that Hitachi included a threshold comparison. He stated: "Well optimally correlates just means – correlate means to compare two things. And optimally means the best. So it's finding the best comparison with the stored patterns. And **it is going to have some threshold limit** that it can't be some maximum distance away or it has to be some minimum distance away. So, if that were

to occur, then a recognition failure would happen." Supp. Ex. 1 (Polish Depo.) at 194:25-195:7 (emphasis added).<sup>5</sup>

Hitachi uses a threshold which is set in a manner to accept a recognition candidate if it will lead to successful recognition and connecting to the desired extension. Hitachi both expressly discloses a reliability check with its reference to "optimally correlates" and inherently discloses a reliability check because it connects the caller to the "desired" extension and only uses the fully automated path of the dual path system when the speech was "successfully" recognized.

In order for Hitachi to ensure that the "desired" extension number is reached, the threshold of the system must be set at a level so that the a speech recognition candidate that meets the threshold will be accurate. Supp. Ex. 2 (Zatkovich Invalidity Report) at ¶¶ 121-131. The result of this process is that the caller will be connected to the desired extension. *Id.* at ¶ 136.

### **3. Nuance's New Translation Does Not Create A Fact Issue**

#### **(a) Nuance's New Translation Should Be Excluded**

Nuance attempts to concoct a fact issue by introducing an 11<sup>th</sup> hour translation of the Hitachi patent that does not include the phrase "optimally correlate." D.I. 153 at Nuance Appx 0504-0511. The translation is untimely and should be excluded.

This Court has the power to exclude untimely evidence from the non-moving party in summary judgment, particularly where, as here, the party producing the evidence was on notice of the potential relevance of the evidence years before the summary judgment motion was

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<sup>5</sup> In connection with Nuance's opposition brief, Dr. Polish attempts to recast his unequivocal testimony on the presence of a threshold in Hitachi. He now states that he "was only testifying to one possible way of building the system of the Hitachi patent." D.I. 153 at Nuance Appx 0448 (¶ 20). However, Dr. Polish did not qualify his testimony at all during the deposition. His equivocation in an attempt to create a fact issue in opposition to Tellme's motion rings hollow.

filed. *Chime v. PPG Indus., Inc.*, 402 F.3d 1371, 1380-81 (Fed. Cir. 2005) (finding no abuse of discretion when district court excluded testing evidence offered "seven weeks after the close of fact discovery and the passing of the deadline for filing case dispositive motions" and the party producing the evidence was previously on notice that the testing might be relevant).

Nuance has had Tellme's translation of the Hitachi patent since July 2007. In the more than two years since then, both sides' experts addressed Tellme's translation. Nuance's expert did not rely on – or even mention – a different translation in his expert report or in his deposition. Nuance never notified Tellme that it would be providing a different translation. The first time Nuance mentioned a different translation was in its opposition brief, filed on September 15, 2009.

If Nuance wanted to rely on a different translation of Hitachi, the time to do so was before the service of its rebuttal expert on validity. There is no justification for Nuance's untimely production of its translation. It should be excluded. *Chime*, 402 F.3d at 1380-81.

**(b) Hitachi Teaches A Reliability Threshold Under Either Translation**

On the merits, the translation does not create a fact issue. The presence of a reliability threshold is not contingent on the phrase "optimally correlate." Supp. Ex. 3 (Zatkovich Depo.) at 205:18-206:9. The fact that the Hitachi patent does not always find a "recognition" and can have a "recognition failure" means that a threshold must exist. *Id.* Without a threshold, there would always be some recognition result generated, even if there was silence on the line.

Moreover, the Hitachi patent discloses a standard pattern matching technique. Supp. Ex. 2 (Zatkovich Invalidity Report) at ¶¶ 125-131. Thresholds are standard in pattern matching techniques. *Id.* at ¶¶ 62-71, 121-124. Without the use of a threshold, the disclosed

functionality of the Hitachi systems, including connecting to a "desired connection" and determining whether the speech was "successfully recognized" would not be possible. Supp. Ex. 3 (Zatkovich Depo.) at 205:18-206:9.

**B. Hitachi Discloses Determining If The Speech Was Recognizable or Unrecognizable**

For the same reasons that Hitachi discloses whether speech was reliably recognized, it discloses whether the speech was recognizable or unrecognizable. D.I. 140 at 19. Nuance does not appear to seriously dispute this point given that there is no "reliability" requirement in connection with this claim term. If the Hitachi system recognizes the speech, it follows the completely automated path. If it does not recognize the speech, the Hitachi system reverts to the operator backup path.

**C. Hitachi Discloses Means For Determining . . . Reliably Recognized or Recognizable/Unrecognizable**

Nuance does not dispute that Hitachi discloses "means for determining . . . " under Tellme's proposed construction.

With respect to Nuance's proposed construction, Hitachi discloses a probability of correctness or its equivalent. As discussed in detail in both Tellme's opening brief and here, Hitachi discloses the use of a threshold where distance scores (*e.g.*, a measure of how close a proposed recognition candidate is to a template) are compared to a threshold.<sup>6</sup> If the distance score meets the threshold set by the Hitachi system, then the recognition is considered reliable. The distance score and probability of correctness have an inverse relationship. The lower the

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<sup>6</sup> Depending on how an application is set up, a higher distance score may mean that the match is closer (*e.g.*, the Jones article uses a score of 128 as a perfect match) or a lower score may mean that the match is closer (*e.g.*, a distance score of 0 means that there is zero difference between the candidate and template). D.I. 143 at Ex. 4 (p. 64); Supp. Ex. 1 (Polish Depo.) at 35:1-36:11.

distance score of the candidate (*i.e.*, the closer the recognition candidate is to the template), the higher the probability that it is correct.

Probability of correctness does not require a number (*e.g.*, 98% probability); it can be more qualitative (*e.g.*, highly probable). Supp. Ex. 1 (Polish Depo.) at 85:21-23 ("It could be a number zero to 100. It could be highly probable, not probable."). Hitachi's use of distance scores with a threshold provides a qualitative probability of correctness and meets the claim limitation under Nuance's proposed construction. Supp. Ex. 2 (Zatkovich Invalidity Report) at ¶¶ 121-131; Supp. Ex. 3 (Zatkovich Depo.) at 196:3-25; 199:11-200:9.

#### **D. Hitachi Discloses Completion Of The Desired Task Through Automation**

Nuance's argument that this limitation is not met by Hitachi is perplexing. This is perhaps the most basic element of the claims of the '088 patent and certainly does not represent anything inventive by Mr. Shipman.

The task in Hitachi is to connect the caller with the desired telephone extension. When the Hitachi system reliably recognizes the caller's request, it is undisputed that the connection to the desired connection is fully automated. The telephone switching network of the Hitachi system is used to route the call to the desired extension. Supp. Ex. 2 (Zatkovich Invalidity Report) at ¶ 136 and p. 54 (Fig. 1).

In situations where the operator-assisted path is invoked, the operator keys in the extension number into a keypad based on the recorded speech from the caller or from talking to the caller. The operator's keypad is connected to the automated system disclosed in Hitachi. D.I. 143 at Ex. 2 (TELLME0006125). The system then connects the call to the desired extension by the very same telephone switching network used in the completely automated path. Supp. Ex. 2 (Zatkovich Invalidity Report) at ¶ 144. The connection to the desired extension is not "completed solely by the operator." D.I. 151 at 20. The operator does not get up out of his seat

and walk the phone over to the office of the person being called; the connection happens through automation.

Hitachi does not specifically go into the fine details of the rudimentary task of connecting calls. Hitachi expressly notes that it omitted the details because the "operations and actions associated with this type of connection and an exchange-based connection are the same as those encountered in common practice . . ." D.I. 143 at Ex. 2 (TELLME0006120).

Nuance seizes on a reference in the Hitachi patent to the operator announcing the call as evidence that Hitachi did not complete the task through automation. The announcement of the call is based on formality (particularly within the very formal Japanese culture of the 1970s) and not any technical limitations on the system. Nuance's expert admits that there is no technical requirement for the operator to announce the call and that the operator "could enter an extension and hang up and let the call transfer through without any kind of intervention." Supp. Ex. 1 (Polish Depo) at 123:6-9; *id.* at 120:21-123:10.

**E. Nuance Mischaracterizes The Testimony Of Tellme's Expert**

In trying to create a fact issue, Nuance repeatedly misrepresents the testimony of Ivan Zatkovich, Tellme's expert.

**1. Mr. Zatkovich Testified That Hitachi Discloses "Reliably Recognized" Under Nuance's Proposed Construction**

Nuance's contention that "Mr. Zatkovich confirmed that this opinion [regarding the absence of a claim element in Hitachi] was not contingent on the particular language of Nuance's proposed construction . . . [but] applies to any construction of reliably recognized that requires an accurate recognition" is misleading. D.I. 151 at 15-16.

Throughout his deposition, Mr. Zatkovich testified to the fact that the term "accurately recognized," as proposed by Nuance, was ambiguous. He testified that there were at

least two different meanings of accurately recognized. One meaning of "accurate recognition," as he understood it, required "[s]ome sort of confirmation, either directly with a prompt to the user or some sort of Q/A [question and answer] feedback to actually verify the accuracy of the information." Supp. Ex. 3 (Zatkovich Depo.) at 18:19-22. For example, the system would ask the caller, "Did you say Mr. Jones on 7<sup>th</sup> Street?," in order to confirm the accuracy of the recognition.

In the passage of Mr. Zatkovich's deposition cited by Nuance (19:18-20:6) to support its misleading claim that "his opinion was not contingent on the particular language of Nuance's proposed construction," Mr. Zatkovich expressly qualified his response by stating "Again, my opinion on accurately recognized means there is a confirmation or Q/A feedback to determine the accuracy. If that was the court's meaning of that construction, then I would say that that's neither present in the Tellme service, nor in the Hitachi patent." *Id.* at 19:24-20:6.

Mr. Zatkovich also testified on a second meaning of accurately recognized and he confirmed that the Hitachi patent met the second meaning. "There is another meaning of accurate. Okay? If you are looking at accurate just as some reliability factor, not as a form of correctness, then yes, I would say the Hitachi patent does provide accurate recognition to a certain degree." *Id.* at 20:17-22.

Mr. Zatkovich's testimony just confirms the ambiguity that arises with Nuance's proposed claim construction of this term. D.I. 134 (Tellme's Opening Claim Construction Brief) at 10-12. The system is never going to know if its result is 100% accurate unless a human tells it that it is correct.

If the Court adopts Nuance's proposed construction for reliably recognized and further adopts a construction requiring user confirmation or a Q/A feedback loop, Mr. Zatkovich



testified that the '088 patent would be obvious in light of the Hitachi patent and the other prior art because a "confirming prompt was well-known in the industry, it was obvious, and it was well-practiced, as a method for confirming the accuracy of a speech utterance." Supp. Ex. 3 (Zatkovich Depo.) at 254:22-24. Nuance has not disputed this contention.

**2. Mr. Zatkovich Testified That Hitachi Discloses Inputting Correct Information and Reprompting**

Nuance's claims that Mr. Zatkovich testified that the Hitachi patent did not disclose "inputting correct information" as required by claim 1 and "reprompting" as required by claim 2 are also misleading. D.I. 151 at 20-21.

Nuance's brief quotes Mr. Zatkovich correctly but fails to point out the most salient fact—that the questions posed to Mr. Zatkovich were in the context of a situation when the Hitachi system reliably recognized the speech.

Mr. Zatkovich testified that in a situation when the speech was reliably recognized by the Hitachi system, a human operator did not input correct information and the system did not reprompt the user to speak his request again. Indeed, there is no need for either of these actions to happen because the Hitachi system will follow the fully automated path to complete the task.

In situations where the speech is not reliably recognized, Mr. Zatkovich unequivocally testified that Hitachi performs all of the steps of the '088 patent, including "inputting correct information" and "reprompting." Supp. Ex. 3 (Zatkovich Depo.) at 255:11-257:25. Moreover, Nuance's expert does not even contest the presence of these elements in Hitachi.

## V. THE '088 PATENT IS OBVIOUS IN LIGHT OF THE PRIOR ART

Under the standards of *KSR Int'l. Co. v. Teleflex*, there is no reasonable debate that the '088 patent is invalid as being obvious over the Hitachi patent combined with the knowledge of one of ordinary skill in the art, common sense, and/or the Rabiner or Jones references. 550 U.S. 398 (2007). There is no invention. The '088 patent is simply "[t]he combination of familiar elements according to known methods . . . . [which] does no more than yield predictable results." *Id.* at 416. As such, the patent is invalid. Moreover, the allegedly distinguishing features are plain common sense.

Nuance's argument for non-obviousness ignores the starting point for the inquiry – the Hitachi patent. This reference, which was never before the Patent Office, by Nuance's own admission is "a substantial step along the way from an entirely automated system" to the claimed invention of the '088 patent. Supp. Ex. 1 (Polish Depo.) at 220:22-221:8 (emphasis added). The alleged differences between Hitachi and the '088 patent are insubstantial.

### A. **The Allegedly Missing Elements Were Found In The Prior Art**

Reliability determinations were common knowledge before the time of the '088 patent. In addition to Hitachi, the Rabiner and Jones references reflect the common knowledge and disclose reliability determinations. D.I. 140 at 24-27. It is most clearly stated in Jones, which expressly discloses a "range from 0 to 128," corresponding with "no match" (0) to "perfect match" (128) for identifying how close a recognition candidate is to a template. D.I. 143 at Ex. 4 (p. 66). Anything close to a perfect match is highly reliable. Moreover, Nuance admits that Mr. Shipman did not invent the concept of reliable recognition. Supp. Ex. 1 (Polish Depo.) at 41:20-22.

Similarly, Nuance admits that confidence scores and probability of correctness were known in the art prior to the '088 patent. *Id.* at 93:10-14. Mr. Shipman did not invent any

new method or metric for determining if something was reliably recognized. *Id.* at 93:10-17. As discussed above, Hitachi discloses a probability of correctness. Jones also discloses a probability of correctness with its use of the threshold. Supp. Ex. 3 (Zatkovich Depo.) at 168:9-12; 261:17-262:2.

Automatic completion of a call after operator invention has been in the prior art since the time that phone operators started using automatic switching systems and moved away from the manual switchboards which required the operators to plug in and pull out cables to make connections. This transition happened well before 1988.

**B. It Was Obvious and Apparent To Add Reliably Recognized To Hitachi**

As set forth above and in Tellme's opening brief, determining if speech was reliably recognized was known in the art. The various metrics that the '088 patent allegedly discloses for determining reliable recognition were known as well.

Hitachi discloses determining whether speech was reliably recognized. However, if it is determined that Hitachi does not contain this disclosure, it is obvious and apparent that one of skill in the art would combine a reliability check with Hitachi in the same manner claimed in the '088 patent.

As noted above, reliability was a central goal of speech recognition. Nobody wanted unreliable systems. The Hitachi system helped increase the overall reliability rate of speech recognition by providing an operator assisted path. If, as Nuance alleges, there was a known problem in Hitachi with unreliable recognition making it through the fully automated path, then there is an obvious and apparent motivation to add a known reliability check to make the system more reliable. The reliability check would make sure that only reliable recognition

made it through the fully automated path while unreliable recognition was diverted to the operator.

The motivation to combine Hitachi and a reliability check renders the '088 patent obvious. *KSR*, 550 U.S. at 418 (combining known elements leads to a determination of obviousness when there exists "an apparent reason to combine the known elements in the fashion claimed by the patent at issue"). Given a known problem (reliability) and a known solution (reliability checks), it was obvious to combine Hitachi with a reliability check. *Id.* at 419-20 ("One of the ways in which a patent's subject matter can be proved obvious is by noting that there existed at the time of invention a known problem for which there was an obvious solution encompassed by the patent's claims.").

Nuance's contention that the prior art taught away from a reliability check using high thresholds is untrue (*e.g.*, Jones' use of a high threshold) and does not make Mr. Shipman's claimed invention patentable. There are only three options that one has with setting a threshold: keep it as is, lower it, or raise it. By any measure, three options are a "finite number of identified, predictable solutions" that a person of ordinary skill in the art had within his technical grasp to pursue. *KSR*, 550 U.S. at 421. The fact that Mr. Shipman chose an option of raising the threshold to ensure reliability is "the product not of innovation but of ordinary skill and common sense." *Id.*

### **C. The '088 Patent Did Not Lead To Unexpected Results**

Nuance's contention that the '088 patent "led to unexpected results" by "actually increas[ing] the overall recognition rate of the system" is also false. D.I. 151 at 25. A human operator is more likely than an automatic speech recognizer to correctly understand what a caller says. Raising the reliability standard of the automatic speech recognition causes more calls to be

sent to the operator. As a result of the fact the operator is more reliable than the computer, one would fully expect the overall recognition rate of the system to increase.

**D. Secondary Considerations Support The Determination Of Obviousness**

"[G]iven the strength of the prima facie obviousness showing, the evidence on secondary considerations [is] inadequate to overcome a final conclusion that [the '088 patent] would have been obvious." *Leapfrog Enters., Inc. v. Fischer-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007); *see also Rothman v. Target Corp.*, 556 F.3d 1310, 1322 (Fed. Cir. 2009) (same); *Ball Aerosol and Specialty Container, Inc. v. Limited Brands, Inc.*, 555 F.3d 984, 994 (Fed. Cir. 2009) (same); *Sundance, Inc. v. Demonte Fabricating Ltd.*, 550 F.3d 1356, 1368 (Fed. Cir. 2008) (same); *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1372 (Fed. Cir. 2007); *Anderson's-Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57, 61 (1969) (secondary considerations "without invention will not make patentability").

Nuance presents no actual evidence of long-felt need for the '088 patent, particularly in light of the fact that Hitachi already disclosed the allegedly novel "dual path" of the '088 patent.

There is no evidence that any commercial success, as allegedly evidenced by Nuance's and Tellme's use of the invention, is attributable to the determination of whether speech was "reliably recognized" as opposed to the rest of the automated speech recognition system, including the dual-path with record/playback that formed the basis for patent allowance. The Tellme documents cited by Nuance as a "*See e.g.*," cite do not demonstrate the alleged importance of "reliably recognized." D.I. 151 at 26.

There is no evidence of failed attempts by others. There is no evidence that Hitachi ever set out "to develop a successful dual-path system with broad applicability." *Id.*

And there is certainly no evidence that a lack of a "reliability determination probably caused . . . failure." *Id.* These conclusions are speculation on Nuance's part.

Finally, the prior art did not teach away from the '088 patent. As discussed above, the prior art taught about the importance of reliability in speech recognition and the Jones reference disclosed the use of a high threshold.

In sum, none of the secondary consideration factors can save the '088 patent over the invalidating prior art.

### **CONCLUSION**

For the reasons set forth above and in Tellme's opening brief, this Court should grant Tellme's motion for summary judgment of anticipation and obviousness.

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